

Appl. No. 09/047,662
Amendment dated July 28, 2004
Reply to Office Action of January 28, 2003
Attorney Ref. No.: 076934-0276492

I. AMENDMENT

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 53 is amended and new claims 70-80 are added.

1 - 52. (Canceled)

53. (Currently amended) An isolated, ~~biologically pure~~ antisense oligonucleotide that ~~is~~ possesses a complementary structure to at least a portion of the a gene encoding a peripheral-type benzodiazepine receptor (PBR) are having that comprises the nucleic acid sequence contained in SEQ ID NO: 1 or SEQ ID NO: 2;

wherein said oligonucleotide, when introduced into a cell line that expresses said PBR gene inhibits the expression thereof, and thereby inhibits proliferation of said cell line relative to an otherwise identical cell line which does not comprise said antisense oligonucleotide.

54. (Previously presented) The antisense oligonucleotide of claim 53, which possesses a complementary structure to at least a portion of the nucleic acid sequence contained in SEQ ID NO: 1.

55. (Previously presented) The antisense oligonucleotide of claim 53, which possesses a complementary structure to at least a portion of the nucleic acid sequence contained in SEQ ID NO: 2.

56. (Previously presented) The antisense oligonucleotide of claim 53, which possesses a size ranging from 7 to 40 nucleotides.

57. (Previously presented) The antisense oligonucleotide of claim 53, which inhibits the proliferation of a human breast cancer cell line.

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58 – 63. (Withdrawn)

64. (Previously presented) The antisense oligonucleotide of claim 53, which comprises part of a vector.

65. (Previously presented) The antisense oligonucleotide of claim 53, which is comprised in a vector which is expressed in the mammary gland.

66 – 69. (Withdrawn)

70. (New) The antisense oligonucleotide of claim 53, which comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.

71. (New) The antisense oligonucleotide of claim 70, which inhibits the proliferation of a human breast cancer cell containing a PBR protein that comprises the amino acid sequence shown in SEQ ID NO:3 when the oligonucleotide is introduced into said cell.

72. (New) The antisense oligonucleotide of claim 70, which is encoded by a vector and is synthesized in a mammalian cell following introduction of said vector into said cell.

73. (New) The antisense oligonucleotide of claim 72, which is synthesized in and inhibits the proliferation of a human breast cancer cell containing a PBR protein that comprises the amino acid sequence shown in SEQ ID NO:3 when the vector is introduced into said cell.

74. (New) An isolated antisense oligonucleotide that is complementary to at least a portion of a gene encoding a peripheral-type benzodiazepine receptor (PBR) that comprises the PBR amino acid sequence shown in SEQ ID NO:3;

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which antisense oligonucleotide inhibits the expression of said PBR gene when it is introduced into a mammalian cell that expresses said PBR gene, and thereby inhibits proliferation of said cell relative to an otherwise identical cell which does not contain said antisense oligonucleotide.

75. (New) The antisense oligonucleotide of claim 74, which is complementary to a portion of a PBR gene that encodes a fragment of a PBR protein shown in SEQ ID NO:3 that comprises the mutant residues threonine 147 and arginine 162.

76. (New) The antisense oligonucleotide of claim 74, which comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.

77. (New) The antisense oligonucleotide of claim 74, which inhibits the proliferation of a human breast cancer cell containing a PBR protein that comprises the amino acid sequence shown in SEQ ID NO:3 when the oligonucleotide is introduced into said cell.

78. (New) The antisense oligonucleotide of claim 74, which is encoded by a vector and is synthesized in a mammalian cell following introduction of said vector into said cell.

79. (New) The antisense oligonucleotide of claim 78, which is synthesized in a mammary gland cell following introduction of said vector into said mammary gland cell.

80. (New) The antisense oligonucleotide of claim 78, which is synthesized in and inhibits the proliferation of a human breast cancer cell containing a PBR protein that comprises the amino acid sequence shown in SEQ ID NO:3 when the vector is introduced into said cell.